

ESSENTIAL

# Brain Hygiene





PAGES 3-7

## THE GLYMPHATIC SYSTEM IS THE KEY TO A HEALTHY BRAIN



PAGES 13-15

## THE ROLE INFECTIONS PLAY IN NEUROLOGICAL DISEASE



PAGES 16-19

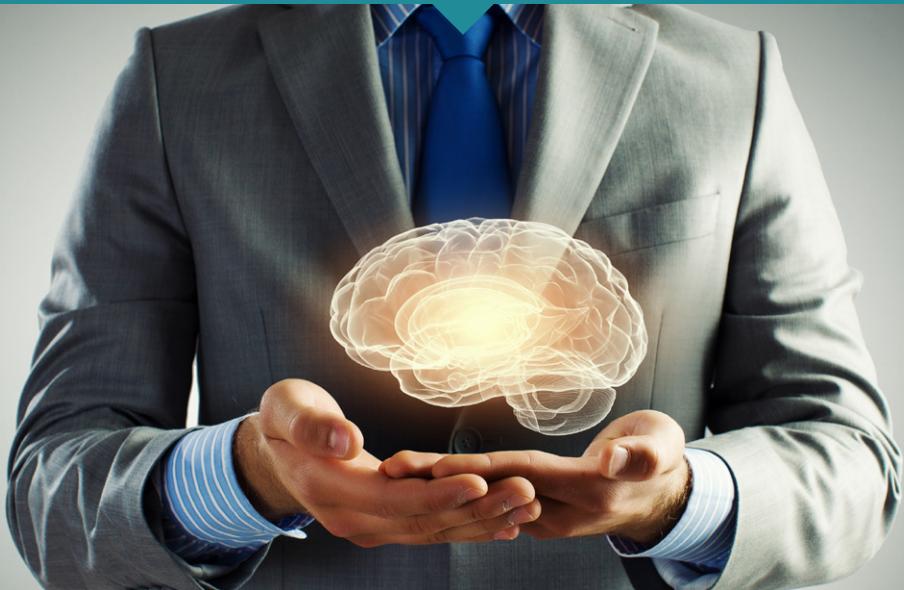
## SUPPLEMENTS & BINDERS FOR YOUR BRAIN HYGIENE

# COMPASSION + HEALING + HOPE

At Sophia Health Institute®, our world-class team treats the underlying causes of complex chronic illness through patient-centered care.

Our patients have often struggled for years, searching for answers to understand their illnesses. Sophia Health Institute's model of medicine addresses the true cause of disease, focusing on chronic infections, environmental toxicity, genetic susceptibilities, nutrition, lifestyle, and the **Five Levels of Healing**.





## YOUR FIRST LINE OF DEFENSE

# Sleeping Giant: The Glymphatic System

Your glymphatic system is an important waste clearance system for your body. Our brain uses this system to drain the toxins away while we sleep. Each night, during deep sleep, the brain shrinks and gets washed with cerebrospinal fluid, and this waste is carried through the glymphatic system and gets moved into the peripheral lymph.

While this is happening, the system is also bringing nutrients to neurons and removing toxicity out of the brain. **This system is how our body keeps neurological degeneration and disease at bay, and is one of the most underappreciated but vital systems in our bodies.** It is also a system that is delicate, easily injured and upset.





The best example of an injured glymphatic system comes from those who have had a traumatic brain injury. Well known examples include car crashes or professional athletes who have experienced multiple concussions. However, the day to day effects of our society has lead to people with otherwise healthy functioning brains to suffer from injury to their glymphatic systems. Some of the modern-day culprits include improper sleeping habits and technology disrupting sleep patterns, which have a negative effect on our glymphatic system.

It is also important to support proper glymphatic drainage. The less congested the cervical lymph nodes and the entire lymphatic system the better able the glymphatic system will be to drain and protect the brain against environmental exposures. When your system is overloaded with toxins that are only building and not draining properly, the glymphatic system becomes compromised. There is only so much that can be done before the system is overwhelmed, and the toxins begin to attack your brain.

## **SO WHAT ARE SOME WAYS WE CAN HELP OUR GLYMPHATIC SYSTEM?**



**What are 3 ways to support this quiet sleeping giant which is so critical to keeping the brain healthy and vibrant?**



1

## Drink a glass of filtered water as soon as you wake up

Your brain shrinks over 60% every single night when you sleep. That's more than just a shocking statistic, it is a fact that you can use as a tool. If your brain shrinks to help the glymphatic system move toxins out of your body, then you have to help the brain fill back up with healthy fluids. You can do this by drinking a glass of filtered water with electrolytes to promote hydration as soon as you wake up. We suggest the [Berkey Water Filter](#) which removes 200 unsafe contaminants. Before you get up to shower or start your day, before your daily distractions pull you in, stop and have a drink.

Not only will this be essentially vital to your glymphatic system and brain health, but you will also find yourself more awake and alert every day. One easy way to remember to drink water in the morning is to fill a glass or water bottle in the evening, and put it next to your bed before you go to sleep. When you wake up you can have instant access.





2

## Exercise Daily

Previously it was thought that the glymphatic system was only effective at night during sleep and was the only way to flush toxins from the brain, but a new study shows that exercise can positively affect the function of the glymphatic system. In this study, they gave one group of mice access to a running wheel, and another group of mice had no access to exercise. After five weeks, the group of mice that had access to exercise showed a more than two-fold increase in glymphatic flow.

So whether it is yoga, walking, running, golf, tennis, Zumba or any other form of exercise, it can help to increase glymphatic flow and support brain health.





3

## Hours of Sleep

Although exercising supports glymphatic flow, the glymphatic system doesn't get activated until you are asleep. So great flow doesn't help your brain UNLESS it is paired with sleep.

The recommended amount of sleep for an adult is 7 to 9 hours. Our brain needs to be in a state of deep sleep for our glymphatic system to work.

It may feel like we do nothing while we sleep, but our bodies are working in overdrive to heal and maintain function. When you don't get enough sleep the glymphatic flow is interrupted and toxins and infections can accumulate in the brain and lead to neural degenerative diseases or other brain symptoms.





# The Importance of Sleep Posture of Your Brain

In recent years, general awareness of the negative health impacts of sitting for extended periods of time has increased. Researchers have gone as far as to say that “sitting is the new smoking”. NASA scientist Dr. Joan Vernikos has shown that excessive sitting causes many of the same problems that astronauts experience in space due to the reduced force of gravity on the human body. The deficiency in gravity from sitting can cause physical degeneration of the spine, muscles, and connective tissue, as well as obesity and early death. Most people, however, are not aware that **sleeping on a flat surface has the same negative impacts as sitting or weightlessness in outer space.**

**Research has shown that sleeping on a flat surface can cause reduced sleep quality, migraines, Alzheimer’s disease, glaucoma, sleep apnea, and strokes, among other diseases.**





There is no real reason or logic behind why humans sleep on a flat surface. One day, someone decided to make a flat bed, and it must have caught on. Sleeping on a flat surface is not the norm in the animal kingdom. Most mammals will choose to sleep with their heads uphill if they can. Elk and deer, for instance, prefer to sleep with their head uphill.

Gravity inclined sleeping is exactly what it sounds like. Instead of sleeping on a flat surface, the bed is at a slight incline of 3.5 to 5 degrees. The main benefit behind inclined bed therapy is improved circulation of blood and lymph, simply by gravity. When you sleep, your brain detoxifies itself through the glymphatic system. Adding a five-degree incline to your sleeping surface can help the glymphatic system drain “downhill” to the gut to be excreted. This can help detoxify heavy metals, pathogens, and other harmful substances from the brain.



**Beds found in the tombs of ancient Egyptian royalty were almost always at a 5-degree incline. For instance, King Tutankhamen's bed, what looks like a headboard is actually the feet end.**





## **A CONDITION CALLED CHRONIC CEREBROSPINAL VENOUS INSUFFICIENCY (CCSVI) IS VERY COMMON IN CHRONIC DISEASE.**

In CCSVI, the blood and lymph flow out of the brain is compromised, leading to neurological problems. It is well known that CCSVI symptoms worsen while lying flat.

Gravity inclined sleeping also has numerous benefits on the body structure. The slight incline is enough to restore the force of gravity on the body, straightening out the spine, as well as strengthening the muscles, fascia, ligaments, and tendons. Sleeping inclined can also help prevent degeneration of the spine and connective tissue associated with aging. In addition, it can help with poor postural conditions such as kyphosis, lordosis, and scoliosis, as well as reduce the symptoms of restless leg syndrome (RLS).





## **IN THE UNITED STATES AND OTHER WESTERNIZED COUNTRIES, THERE IS AN EPIDEMIC OF SLEEP-DISORDERED BREATHING.**

Snoring and obstructive sleep apnea are major risk factors for about every disease due to a lack of oxygen during sleep. Sleeping on an incline helps to open the airway, alleviating snoring and restoring oxygen to the brain. The force of gravity from sleeping inclined also prevents acid reflux and heartburn.

Experimentation has shown that 3.5 to 5 degrees is the ideal incline for improved sleep. Folding just the head of the bed up with an adjustable bed frame will not work, the entire bed has to be on a slope. For a standard king or queen-sized bed, this comes out to adding roughly 6 inches of height to the head of the bed. Adding 3 inches of support to the middle of the bed frame may also be needed for stability. You can buy 6-inch risers online for about \$20, or use books, bricks, or wood.

**The force of gravity from sleeping inclined also prevents acid reflux and heartburn.**





## **THERE IS ALSO A SMARTPHONE APP CALLED TILTMETER THAT CAN BE USED TO MEASURE THE INCLINE OF THE BED.**

We also recommend to patients when possible to invest in a SAMINA inclined bed. It was created specifically to support proper sleep posture.

Sleeping on an incline can feel weird at first, although some people adjust with ease because it is only a modest incline. Some people may need to start with just a few inches and increase every week or two as they get used to it. Since it does increase detoxification from the brain, taking chlorella or another toxin binder before bed is recommended. It can take weeks of sleeping on an incline to start noticing improvements, with slow improvements over about 6 months. After the brief adjustment period, most people choose to never go back to sleeping flat again.





# The Correlation Between Infections & Neurological Diseases

## THE ROLE CHRONIC INFECTIONS PLAY IN BRAIN HEALTH

Chronic infections are infections that continue coming back. They can affect you multiple times, slipping past your immune responses to target specific portions of your brain over and over again. These infectious microbes secrete exotoxins and wastes that attack the vulnerable parts of the brain, causing neurological diseases such as Alzheimer's and Dementia.

Chronic infections also help to contribute to autoimmunity. The buildup of toxins weakens your immune responses and causes gaps in the protection that your immune system is trying to provide. The cycle of infection and a weakened immune system is a deadly force that is hard to stop once it has begun. To prevent chronic infection, your first line of defense is to continuously build and reinforce your immune system, so it does not have a chance to weaken any more than it already has.





## TOXINS BUILDING IN OUR BRAINS

Every single day we are exposed to a number of toxins in our daily environment. Every toxin that is in the environment will eventually be in our bodies. Neurotoxins are toxins that specifically target the nerves in our bodies. Once they reach their target they attack, and this is one of the biggest contributors to neurological disease.

Nerves are not just electric wires, they serve a number of vital purposes. One of these is axonal transport, a system that moves nutrients from the brain to the cells. The neurotoxins use this transport system to travel into cells and do major damage. Symptoms of neurological diseases, like brain fog and impaired memory, can start presenting almost immediately after the cells have been attacked by these toxins.

A few of the more prevalent toxins in our environment include wood preservatives, metals such as mercury, aluminum, and lead, petrochemicals, and pesticides. If that sounds like a lot, that's because it is. These are just a few of the many toxins invading our bodies, and there is evidence that all of these toxins contribute to the deterioration of brain health in various ways. While there's no way to completely avoid them, there are things you can do to support and protect your brain.





## WHAT WE KNOW AND WHAT WE CAN DO

The most important thing to know is how your immune system responds to everything it interacts with. We are all exposed to various toxins and infections daily, but not all of them end up harming us. Each person is affected differently and not all of us end up developing the same neurological diseases. The difference is in each individual immune system response. The key is to build up the strength of your immune system and its ability to fight against infections. This is one of the most powerful ways you can prevent neurological diseases.

**Each person is affected differently and not all of us end up developing the same neurological diseases.**

Building up your immune system starts by ensuring your body's glymphatic system is working properly and flushing out the harmful biotoxins that are secreting wastes into our brains.





# Supplements & Binders to Support Glymphatic System & Brain Health

When we're talking about supplements to help you to increase your brain health, we want to focus on a couple of things. The main four are blood flow, lymph drainage, pathogens, and how to get environmental toxins out of your brain.

Blood flow and lymph drainage go hand in hand because, as mentioned earlier, your lymph and glymphatic systems use blood flow to drain toxins out of your brain. Your blood flow matters because that is how toxins leave your brain and allow your brain to heal. One of the supplements used as Sophia to promote blood flow is Brain Tincture.





**BRAIN TINCTURE** consists of herbs that increase blood flow in your brain including ginkgo, rosemary, and bacopa. These herbs not only help with your memory and recall, but the bacopa also helps your adrenal system which is another neglected part of the brain.

Another powerful supplement is **BAIKALIN POWDER** which contains skullcap. Skullcap as a supplement is unique in what it can do for our brains. Our brain is made up of over 86 billion neurons, constantly firing messages back and forth to one another. Production of neurons is a vital part of keeping our brains in top shape. Baikalin Powder is known to increase the production of neurons. Increased production of neurons means not only that the messages in your brain are moving faster than before, but also that the toxins are being flushed out of your system more efficiently.

Aluminum is one of the key reasons why our brains are in trouble. When we look at dementia and children with autism, there is a statistically more significant amount of aluminum in their brains. Two products we recommend are **BIOSIL** which has active silicon, which is not only good for hair, skin, nails and connective tissue, but it's also useful for aluminum detox. We also recommend **ZEOBIND** which is a highly concentrated form of silica to help bind and get aluminum out of our body.

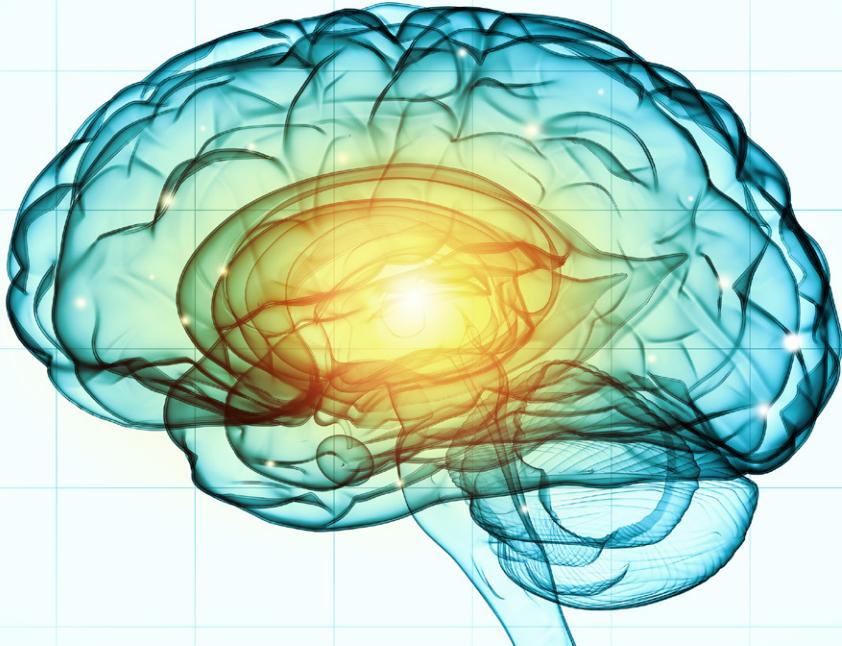




**MELATONIN** is another critical hormone that not only regulates the sleep-wake cycle but new research also confirms is critical for brain health. Melatonin is neuroprotective, helping to clear the brain of environmental stressors and pathogens. Most people are melatonin deficient, not producing enough natural melatonin, to feel these healing benefits.

We suggest liposomal melatonin, but there are multiple delivery options including creams and suppositories. Melatonin can be used at night and most often helps people sleep. If you find you have a melatonin hangover feeling, what we've discovered is that it's not the melatonin but the mobilization of toxins out of your brain. So this is just a caveat; if this occurs, it is essential to work with your practitioner to help support your body. At Sophia, we sometimes pair melatonin with more binders or chelators to mitigate symptoms.

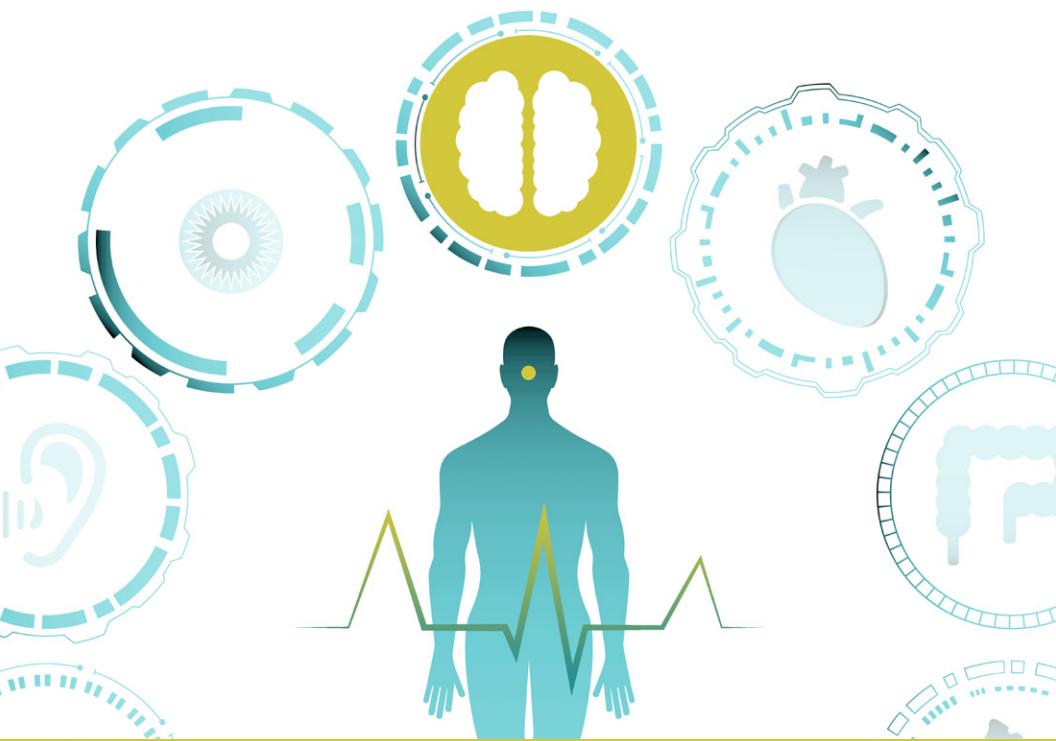




But why are our brains so low in melatonin? The pineal gland is where melatonin is produced and it is being affected by so many things in our modern world, including fluoride, aluminum and EMFs. We recommend **PINEAL CODE** from Physica, which helps create more resilience in your pineal gland. Pineal Code is a drainage remedy that helps the gland release toxins it has built up so your body can regain its own natural melatonin production.

Though these key supplements are important for toxicant elimination and brain health, it is important to first and foremost avoid or lessen your toxic load and stressors whenever you can. If you lower the amount of exposure, you lower the amount of toxins your brain has to fight. We always recommend to patients natural ways to protect and support your pineal gland and produce melatonin for proper sleep hygiene. This includes blue blocking glasses and creating a safe sleep environment free from EMFs.





# LEARN



SOPHIA HEALTH INSTITUTE

# SHOP



SOPHIA NUTRITION

# LISTEN



SPECTRUM OF HEALTH PODCAST